

REMARKS

This is in full and timely response to the Office Action mailed on April 18, 2006. Reexamination in light of the following remarks is respectfully requested.

Claims 12-20 are currently pending in this application, with claim 12 being independent.

No new matter has been added.

Rejection under 35 U.S.C. §103

At least for the following reasons, if the allowance of the claims is not forthcoming at the very least and a new ground of rejection made, then a **new non-final Office Action** is respectfully requested.

Paragraph 4 of the Office Action indicates a rejection of claims 12-14, 19 and 20 under 35 U.S.C. §103 as allegedly being unpatentable over Japanese Patent Application Publication No. 11-191865 to Suzuki et al. (Suzuki) in view of U.S. Patent No. 5,617,131 to Murano et al. (Murano).

Paragraph 5 of the Office Action indicates a rejection of claims 15 and 16 under 35 U.S.C. §103 as allegedly being unpatentable over Suzuki in view of Murano, and further in view of U.S. Patent No. 5,777,335 to Mochizuki et al. (Mochizuki).

Paragraph 6 of the Office Action indicates a rejection of claims 17 and 18 under 35 U.S.C. §103 as allegedly being unpatentable over Suzuki and Murano in view of Mochizuki, and further in view of U.S. Patent No. 6,011,860 to Fujieda et al. (Fujieda).

These rejections are traversed at least for the following reasons.

Claim 12 - Claim 12 is drawn to an optical system having an optical module, the optical module comprising:

a substrate, the substrate including a plate of a first material adhered to a wiring board of a material other than the first material, a through-hole extending through the plate and the wiring board;

an optical element mounted to the wiring board, the optical element including a light receiving portion, the wiring board being between the optical element and the plate;
and

a lens unit mounted to the plate, the lens unit including a lens, the plate being between the wiring board and the lens unit,

wherein the light receiving portion and the lens are disposed along an optical axis, the optical axis extending through the through-hole.

Suzuki - Suzuki arguably teaches a solid-state image pickup device and its manufacture.

However, the Office Action admits that Suzuki does not explicitly disclose that the substrate includes a plate of a first material adhered to a wiring board of a material other than the first material, a through-hole extending through the plate and the wiring board and that the lens unit is mounted to the plate so that the plate being between the wiring board and the lens unit (Office Action at page 3).

Thus, Suzuki fails to disclose, teach, or suggest an optical element mounted to the wiring board, the optical element including a light receiving portion, the wiring board being between the optical element and the plate.

Murano - The Office Action cites Murano for the features that are admittedly deficient from within Suzuki.

Murano arguably teaches the presence of LED arrays 3 (Murano at Figures).

Murano arguably teaches that CCD arrays may be usable in place of the LED arrays for providing an image reading device such as an image sensor (Murano at column 11, lines 43-45).

Murano arguably teaches that, as shown in FIG. 3, the spacer 9 comprises at least double layers consisting of an insulating layer 9b made of an organic film such as a polyester or polyimide film, a paper, or glass, and a metallic layer 9c made of stainless steel, copper, iron, or the like (Murano at column 6, lines 19-23).

The Office Action attempts to associate the substrate 2 of Murano with the claimed wire board; attempts to associate the metallic layer 9c of Murano with the claimed plate; and attempts to associate the LED array 3 of Murano with the claimed optical element (Office Action at page 3).

However, Murano fails to disclose, teach, or suggest the substrate 2 of Murano being between the LED array 3 and the plate; and the metallic layer 9c (Murano at Figure 3).

Thus, Murano fails to disclose, teach, or suggest an optical element mounted to the wiring board, the optical element including a light receiving portion, the wiring board being between the optical element and the plate.

Mochizuki - Mochizuki arguably teaches an imaging apparatus.

However, Mochizuki fails to disclose, teach, or suggest an optical element mounted to the wiring board, the optical element including a light receiving portion, the wiring board being between the optical element and the plate.

Fujieda - Fujieda arguably teaches a small reliable image input apparatus incorporated in fingerprint collation system of personal identification.

However, Fujieda fails to disclose, teach, or suggest an optical element mounted to the wiring board, the optical element including a light receiving portion, the wiring board being between the optical element and the plate.

Withdrawal of this rejection and allowance of the claims is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753.

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

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Respectfully submitted,

By  

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